

REMARKS

Applicants have amended specification. Claims 1-16 are pending in the application. Claims 1-7 are withdrawn from consideration. Claim 11 has been cancelled, claims 8-10 and 12-16 have been amended, and new claims 17-20 have been added.

The following remarks are believed to be fully responsive to the Office Action, and to render all the claims at issue patentably distinguishable over the cited reference. Reconsideration of this application is respectfully requested.

SPECIFICATION OBJECTIONS

The title of the invention and the abstract were objected to for the reason set forth on pages 2-3 of the Office Action.

Applicants have amended the specification to address all issues raised by Examiner. Accordingly, the withdrawal of all specification objections is respectfully requested.

CLAIMS OBJECTIONS

Claims 8, 10 and 13 were objected to for the reason set forth on pages 3-4 of the Office Action.

Applicants have amended the claims 8, 10 and 13 to address all issues raised by Examiner. Accordingly, the withdrawal of all claim objections is respectfully requested.

CLAIM REJECTIONS – 35 U.S.C. § 112

Claims 12, 13 and 16/12 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 12, 13 and 16 have been amended to make more clear the terms of the invention. In view of the amendments above, it is respectfully requested that the rejections under U.S.C. 112, second paragraph, be withdrawn.

CLAIM REJECTIONS – 35 U.S.C. §102

Claims 8, 9, 11-13 and 15 stand rejected under 35 U.S.C. 102(b) as being anticipated by Miyanaga (U.S. Patent No. 5,843,844).

Claim 8 has been amended to include the steps of: etching a portion of a silicon oxide film, the portion exposed through an opening; forming a dielectric layer on a silicon deposition layer including an aperture; and removing an exposed portion of the bottom of the silicon deposition layer by a given thickness to expose a portion of a dielectric layer (See page 11, line 24 ~ page 12, line 14 of the specification). However, Miyanaga does not teach or suggest the steps as etching a portion of a silicon oxide film exposed through an opening, and removing an exposed portion of the bottom of the silicon deposition layer to expose a portion of the dielectric layer.

Examiner contends that Miyanaga discloses a step of forming a probe in the silicon deposition layer around the aperture exposed through the opening. Miyanaga forms a metal wire pattern on the bump formation region (see col. 7, lines 18~24). However, the present invention forms a probe on the exposed portion of the dielectric layer and the silicon deposition layer exposed through the opening (see page 12, lines 15~17 of the specification and amended Claim 8). Therefore, Miyanaga does not teach or suggest such a step as forming a probe on the exposed portion of the dielectric layer and the silicon deposition layer exposed through the opening. In addition, there is no suggestion in Miyanaga of a probe, as claimed in claim 8.

Also, Examiner contends that Miyanaga discloses a step of burying the aperture with a non-linear material. Miyanaga forms a resist pattern to remove a silicon oxide film formed on the silicon substrate (see col. 7, lines 13~17). However, the present invention buries the aperture with a non-linear material (see page 12, lines 20~21). Therefore, Miyanaga does not teach or suggest such a step as burying the aperture with a non-linear material.

As discussed above, Miyanaga provides a method of manufacturing a probe sheet for inspecting an integrated circuit formed on a semiconductor wafer. The probe sheet comprises a bump formed on the bump formation region of the silicon layer to contact with the electrode pad of the semiconductor wafer, and a metallic wire pattern formed on the silicon layer and contacted to the bump through the bump formation region.

In contrast, the present invention provides a method of manufacturing a head for recording and reading optical data. The head for recording and reading optical data comprises a probe exposed through an opening to record or read the optical data, and a non-linear material buried in an aperture for improving throughout of a laser beam passing through the aperture.

As stated above, the structure and function of the head for recording and reading optical data according to the present invention are different from that of the probe sheet of Miyanaga. As a result, a method of manufacturing a head claimed in claim 8 is different from Miyanaga's method.

Accordingly, claim 8 is patentably distinct from Miyanaga. Examiner's reconsideration of the rejection is respectfully requested.

At least for the reasons that the independent claim 8 is allowable, the dependent claims 9-10 and 12-16 depending thereupon include the patentable features of claim 8.

CLAIM REJECTIONS – 35 U.S.C. § 103

Claims 10, 14, 16/12 and 16/14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Miyanaga (U.S. Patent No. 5,843,844).

As discussed above, Miyanaga does not teach or suggest every step or feature of claim 8, from which claims 9-10 and 12-16 depend. Furthermore, Miyanaga does not render obvious the present invention since there is no teaching or suggestion in Miyanaga directed to the Claim 8 limitations described above. For the reasons that the independent claim 8 is allowable, the dependent claims 9-10 and 12-16 depending thereon are also allowable.

NEW CLAIMS

Applicants respectfully submit that the New Claims 17-20 are supported by the original disclosure (See page 15, line 15 ~ page 17, line 1 of the specification), and, thus, no new matter has been added. These claims are also patentably distinguishable over the prior art of record for essentially the same reasons as noted above with respect to Claim 8.

CONCLUSION

In view of the foregoing, it is submitted that all outstanding requirements have been addressed, and the claims pending for examination, namely claims 8-20 are now in condition for allowance, which early action is requested.

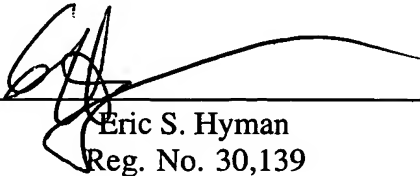
If there are any fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. If a telephone interview would expedite the prosecution of this Application, the Examiner is invited to contact the undersigned at (310) 207-3800.

Respectfully submitted,

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